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1 [Lower bounds on messages and rounds for network authentication protocols](#)

Li Gong

 December 1993 **Proceedings of the 1st ACM conference on Computer and communications security**
Publisher: ACM Press
 Full text available: [pdf\(1.25 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

The encrypted key exchange (EKE) protocol is augmented so that hosts do not use cleartext passwords. Consequently, adversaries who obtain the one-way function file may (i) successfully mimic (spoof) the host to the user, and (ii) mount a man-in-the-middle attack against the encrypted passwords, but cannot mimic the user to the host. Most important security properties of EKE are preserved—an active network adversary has insufficient information to mount dictionary attacks.

2 [Design, implementation, and performance measurement of a native-mode user interface \(extended version\)](#)

R. Ahuja, S. Keshav, H. Saran

August 1996 **IEEE/ACM Transactions on Networking (TON)**, Volume 4**Publisher:** IEEE Press
 Full text available: [pdf\(1.66 MB\)](#) Additional Information: [full citation](#), [references](#)


MB)index terms

Keywords: AAL 5, asynchronous transfer mode, native-mode ATM, per transport layer

3 Authentication in distributed systems: theory and practice

- ◆ Butler Lampson, Martín Abadi, Michael Burrows, Edward Wobber
September 1991 **ACM SIGOPS Operating Systems Review , Proceedings**
ACM symposium on Operating systems principles SOI
Issue 5

Publisher: ACM Press


Full text available:  [pdf\(2.33 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

We describe a theory of authentication and a system that implements it. It is based on the notion of principal and a "speaks for" relation between principals. A principal either has a name or is a communication channel; a compound principal has an adopted role or delegation of authority. The theory explains how to reason about a principal's authority by deducing the other principals that it can speak for. A channel is one important application. We use the th ...

4 Secure audit logs to support computer forensics

- ◆ Bruce Schneier, John Kelsey
May 1999 **ACM Transactions on Information and System Security (TISSEC)**
Issue 2

Publisher: ACM Press


Full text available:  [pdf\(125.50 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

In many real-world applications, sensitive information must be kept it local to an untrusted machine. In the event that an attacker captures this machine, we want to guarantee that he will gain little or no information from the log files and not be able to corrupt the log files. We describe a computationally cheap method for generating entries prior to the logging machine's compromise impossible to read, and also impossible to modify or destroy ...

Keywords: audit logs, auditing, authentication, computer forensics, hash detection

5 Authentication in distributed systems: theory and practice

◆ Butler Lampson, Martín Abadi, Michael Burrows, Edward Wobber
November 1992 **ACM Transactions on Computer Systems (TOCS)**, Vol. 10, No. 4
Publisher: ACM Press


Full text available:  [pdf\(3.37 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

We describe a theory of authentication and a system that implements it. It is based on the notion of principal and a “speaks for” relation between principals. A principal either has a name or is a communication channel; a compound principal has an adopted role or delegated authority. The theory shows how to reason about authentication by deducing the other principals that it can speak for; authentication is one important application. We ...

Keywords: certification authority, delegation, group, interprocess communication, distribution, loading programs, path name, principal, role, secure channel, distributed computing base

6 Nark: receiver-based multicast non-repudiation and key management

◆ Bob Briscoe, Ian Fairman
November 1999 **Proceedings of the 1st ACM conference on Electronic Commerce**
Publisher: ACM Press

Full text available:  [pdf\(168.86 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)


Keywords: Internet, audit trail, key management, multicast, non-repudiation, digital watermark

7 Revokable and versatile electronic money (extended abstract)


◆ Markus Jakobsson, Moti Yung

January 1996 **Proceedings of the 3rd ACM conference on Computer and security**

Publisher: ACM Press


Full text available:  [pdf\(1.53 MB\)](#) Additional Information: [full citation](#), [reference](#), [index terms](#)

8 Undeniable billing in mobile communication

 Jianying Zhou, Kwok-Yan Lam

October 1998 **Proceedings of the 4th annual ACM/IEEE international conference on Mobile computing and networking**

Publisher: ACM Press

Full text available:  [pdf\(864.03 KB\)](#) Additional Information: [full citation](#), [reference](#), [index terms](#)


Keywords: cryptographic protocol, mobile communication security, non-undeniable billing

9 Xunet 2: lessons from an early wide-area ATM testbed

Charles R. Kalmanek, Srinivasan Keshav, William T. Marshall, Samuel P. Restrick


February 1997 **IEEE/ACM Transactions on Networking (TON)**, Volume 5, Number 2

Publisher: IEEE Press

Full text available:  [pdf\(231.69 KB\)](#) Additional Information: [full citation](#), [reference](#), [index terms](#)


Keywords: asynchronous transfer mode, available bit rate, constant bit rate

10 Authentication in the Taos operating system

 Edward Wobber, Martín Abadi, Michael Burrows, Butler Lampson


February 1994 **ACM Transactions on Computer Systems (TOCS)**, Volume 13, Number 1


Publisher: ACM Press

Full text available:  [pdf\(1.88 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)


We describe a design for security in a distributed system and its implementation. In this design, applications gain access to security services through a narrow interface. This interface provides a notion of identity that includes simple principals, group principals, and delegations. A new operating system component manages principals, credentials, and channels. It checks credentials according to the formal rules of a logic of implementation. This implementation is efficient enough to support ...


Keywords: cryptography, mathematical logic

- 11 [Monitoring shared virtual memory performance on a Myrinet-based PC cluster](#)
 Cheng Liao, Dongming Jiang, Liviu Iftode, Margaret Martonosi, Douglas S.
July 1998 **Proceedings of the 12th international conference on Supercomputing**
Publisher: ACM Press

Full text available:  [pdf\(1.35 MB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

- 12 [Atomicity in electronic commerce](#)

-  J. D. Tygar
May 1996 **Proceedings of the fifteenth annual ACM symposium on Principles of distributed computing**
Publisher: ACM Press


Full text available:  [pdf\(1.74 MB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

- 13 [Location-aware mobile applications based on directory services](#)

Henning Maass

August 1998 **Mobile Networks and Applications**, Volume 3 Issue 2

Publisher: Kluwer Academic Publishers

Full text available:  [pdf\(421.47 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

Location-aware applications are becoming increasingly attractive due to

dissemination of wireless networks and the emergence of small and cheap technologies. We developed a location information server that simplifies development of these applications by offering a set of generic location notification services to the application. The data model and the access protocols services are based on the X.500 directory service and the I ...

14 Proceedings - only: New channels, old concerns: scalable and reliable data

◆ Colin Allison, Duncan McPherson, Dirk Husemann
September 2000 **Proceedings of the 9th workshop on ACM SIGOPS European beyond the PC: new challenges for the operating system**

Publisher: ACM Press


Full text available:  [pdf\(76.39 KB\)](#) Additional Information: [full citation](#), [abstract](#)

An interesting trend in the continuing convergence of information technologies emergence of the Internet as a content provider in its own right, as opposed being one of many delivery channels. For example, it is increasingly the items such as court rulings and software releases. Unfortunately the IP protocols employed for reliable data transfer are of the point-to-point type and not scale one-to-many dissemination. Sudden rush ...

15 Flexible control of downloaded executable content

◆ Trent Jaeger, Atul Prakash, Jochen Liedtke, Nayeem Islam
May 1999 **ACM Transactions on Information and System Security (TISSEC)** Issue 2

Publisher: ACM Press


Full text available:  [pdf\(297.79 KB\)](#) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

We present a security architecture that enables system and application requirements to be enforced on applications composed from downloaded content. Downloaded executable content consists of messages downloaded from the network that contain executables that run, upon receipt, on the downloading principal. If not restricted, this content can perform malicious actions, including accessing the principal's private data and sending messages on their behalf ...

Keywords: access control models, authentication, authorization mechanisms, systems, role-based access control

16 Authentication in the Taos operating system


◆ Edward Wobber, Martín Abadi, Michael Burrows, Butler Lampson

December 1993 **ACM SIGOPS Operating Systems Review , Proceeding
ACM symposium on Operating systems principles SOS**
Issue 5**Publisher:** ACM PressFull text available:  [pdf\(1.45 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

We describe a design and implementation of security for a distributed system where applications access security services through a narrow interface. This interface defines a notion of identity that includes simple principals, groups, roles, and delegation. The operating system component manages principals, credentials, and secure communications according to the formal rules of a logic of authentication. Our design is efficient enough to support a substantialia ...

17 A new on-line cash check scheme


◆ Robert H. Deng, Yongfei Han, Albert B. Jeng, Teow-Hin Ngair

April 1997 **Proceedings of the 4th ACM conference on Computer and communications security****Publisher:** ACM PressFull text available:  [pdf\(690.98 KB\)](#) Additional Information: [full citation](#), [references](#)**18 A comparison of mechanisms for improving TCP performance over wireless networks**Hari Balakrishnan, Venkata N. Padmanabhan, Srinivasan Seshan, Randy H. Korth
December 1997 **IEEE/ACM Transactions on Networking (TON)**, Volume 5, Number 6**Publisher:** IEEE PressFull text available:  [pdf\(372.38 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#), [reviews](#)

Keywords: TCP, computer networks, internetworking, link-layer protocols, wireless networks


19 Public-key cryptography and password protocols

◆ Shai Halevi, Hugo Krawczyk

August 1999 **ACM Transactions on Information and System Security** (2 Issue 3)**Publisher:** ACM PressFull text available:  [pdf\(275.84 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

We study protocols for strong authentication and key exchange in asymmetric cryptography where the authentication server possesses a pair of private and public keys and the user has only a weak human-memorizable password as its authentication key. We analyze several simple password authentication protocols in this scenario and show that the security of these protocols can be formally proven based on standard cryptographic assumptions. Remarkably, our analysis shows optimal re ...




Keywords: dictionary attacks, hand-held certificates, key exchange, passwords, public-key protocols

20 The design and implementation of an intentional naming system◆ William Adjie-Winoto, Elliot Schwartz, Hari Balakrishnan, Jeremy Lilley
December 1999 **ACM SIGOPS Operating Systems Review , Proceedings of the seventeenth ACM symposium on Operating systems principles**
Volume 33 Issue 5**Publisher:** ACM PressFull text available:  [pdf\(1.77 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

This paper presents the design and implementation of the Intentional Naming System (INS), a resource discovery and service location system for dynamic and mobile environments. Such environments require a naming system that (i) can describe and make requests based on specific properties of services, (ii) can handle changes due to mobility and performance, (iii) is robust, to handle failures, and (iv) is configurable. INS uses a simple language based on ...

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1 [Authentication services for computer networks and electronic messaging systems](#)

☒ Keok Auyong, Chye-Lin Chee
July 1997 **ACM SIGOPS Operating Systems Review**, Volume 31 Issue 1**Publisher:** ACM PressFull text available: ☒ [pdf\(1.03 MB\)](#)Additional Information: [full citation](#), [abstract](#)

The paper surveys the authentication services used by modern computer systems. It presents the major operational authentication services employed by commercial banks as well as government departments. As distributed system services are exposed to a variety of threats mounted by intruders as well as legitimate users of password-based authentication is not suitable for use on computer networks.

2 [Using smartcards to secure a personalized gambling device](#)

☒ William A. Aiello, Aviel D. Rubin, Martin J. Strauss
November 1999 **Proceedings of the 6th ACM conference on Computer communications security****Publisher:** ACM PressFull text available: ☒ [pdf\(762.94 KB\)](#) Additional Information: [full citation](#), [abstract](#), [index terms](#)

We introduce a technique for using an untrusted device, such as a hand-held device, to securely access a secure database.


assistant or a laptop to perform real financial transactions without a network. The tamper-resistant nature of smartcards to store value on them and perform computations based on user input. We discuss an application of this to a payment technique that has the properties that the user is guaranteed to make money when using the card. The house is guaranteed to make money when using the card.

3 Smart Cards and Biometrics: The cool way to make secure transactions

David Corcoran, David Sims, Bob Hillhouse

March 1999 **Linux Journal**

Publisher: Specialized Systems Consultants, Inc.


Full text available:  [html\(22.95 KB\)](#) Additional Information: [full citation](#), [index](#)

4 Muscle Flexes Smart Cards into Linux

David Corcoran

August 1998 **Linux Journal**

Publisher: Specialized Systems Consultants, Inc.

Full text available:  [html\(16.89 KB\)](#) Additional Information: [full citation](#), [abstract](#)


The newest kind of card for your pocketbook offers better security for the future.

5 FACADE: a typed intermediate language dedicated to smart cards

 Gilles Grimaud, Jean-Louis Lanet, Jean-Jacques Vandewalle

October 1999 **ACM SIGSOFT Software Engineering Notes , Proceedings of the European software engineering conference held jointly with the SIGSOFT international symposium on Foundations of software engineering, ESEC/FSE-7, Volume 24 Issue 6**

Publisher: Springer-Verlag, ACM Press

Full text available:  [pdf\(1.23 MB\)](#) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

The use of smart cards to run software modules on demand has become a major concern for application issuers. Such down-loadable executable content is managed by the card execution environment in order to ensure that an instruction is compliant with the definition of the data stored in this area (i.e. its type).


for smart cards rely on three techniques. For Java Card, either an off-card performs a static ...

6 Strength of two data encryption standard implementations under timing att

◆ Alejandro Hevia, Marcos Kiwi

November 1999 **ACM Transactions on Information and System Security**
Volume 2 Issue 4

Publisher: ACM Press

Full text available:  [pdf\(183.73 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

We study the vulnerability of two implementations of the Data Encryption Standard cryptosystem under a timing attack. A timing attack is a method, recently proposed by Kocher, that is designed to break cryptographic systems. It exploits the errors involved in the implementation of cryptosystems and might succeed even on systems that remain impervious to sophisticated cryptanalytic techniques. An alternative, essentially, a way of obtaining some users ...


Keywords: cryptanalysis, cryptography, data encryption standard, timing

7 Authentication in the Taos operating system

◆ Edward Wobber, Martín Abadi, Michael Burrows, Butler Lampson

February 1994 **ACM Transactions on Computer Systems (TOCS)**, Volume 12 Issue 1

Publisher: ACM Press


Full text available:  [pdf\(1.88 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

We describe a design for security in a distributed system and its implementation. In this design, applications gain access to security services through a narrow interface. This interface provides a notion of identity that includes simple principals, groups, and delegations. A new operating system component manages principals, credentials, and channels. It checks credentials according to the formal rules of a logic of implementation. The implementation is efficient enough to support ...

Keywords: cryptography, mathematical logic

8 Smart cabling: an overview

- ◆ A. H. Uittenbogaard, P. J. A. Lentfert, S. D. Swierstra
September 1990 **Proceedings of the 4th workshop on ACM SIGOPS Eu**
Publisher: ACM Press


Full text available:  [pdf\(308.22 KB\)](#) Additional Information: [full citation](#), [abst](#)

The Smart Cabling project is a cooperative project of HCS Industrial Au the University of Utrecht. Its aim is to build highly reliable transputer ne be used as message passing system in dynamically changing environmer background is provided by research carried out at the University of Utre Cabling network, distributed applications are provided with a fault-toler communication: as long as paths exist between ...

9 On the fly signatures based on factoring

- ◆ Guillaume Poupard, Jacques Stern
November 1999 **Proceedings of the 6th ACM conference on Computer .**
communications security

Publisher: ACM Press


Full text available:  [pdf\(786.71 KB\)](#) Additional Information: [full citation](#), [abst](#)
[citations](#), [index ter](#)

In response to the current need for fast, secure and cheap public-key cryp induced by the fast development of electronic commerce, we propose a r signature scheme, i.e. a scheme that requires very small on-line work for combines provable security based on the factorization problem, short pul short transmission and minimal on-line computation. It is the first RSA-1 scheme that can be used for both ef ...

10 Authentication in the Taos operating system

- ◆ Edward Wobber, Martín Abadi, Michael Burrows, Butler Lampson
December 1993 **ACM SIGOPS Operating Systems Review , Proceeding**
ACM symposium on Operating systems principles SOS
Issue 5

Publisher: ACM Press

Full text available:  [pdf\(1.45 MB\)](#) Additional Information: [full citation](#), [abst](#)
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We describe a design and implementation of security for a distributed sy

applications access security services through a narrow interface. This introduces a notion of identity that includes simple principals, groups, roles, and delegation. The operating system component manages principals, credentials, and secure communications according to the formal rules of a logic of authentication. Our system is efficient enough to support a substantialia ...

11 Anonymous credit cards

- ◆ Steven H. Low, Sanjoy Paul, Nicholas F. Maxemchuk
November 1994 **Proceedings of the 2nd ACM Conference on Computer and communications security**

Publisher: ACM Press


Full text available:  [pdf\(871.53 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

This paper describes a communications networking technique for funds transfer that combines the privacy of cash transactions with the security, record-keeping, and mechanisms of credit cards. The scheme uses a communications network and protocols to separate information. The company that extends credit to the customer collects the bill does not have access to the specific purchases, and the seller and merchandise is convinced that it will be paid without ...

12 A new signature scheme based on the DSA giving message recovery

- ◆ Kaisa Nyberg, Rainer A. Rueppel
December 1993 **Proceedings of the 1st ACM conference on Computer and communications security**


Publisher: ACM Press

Full text available:  [pdf\(261.63 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

In this paper we present a modification of the DSA which allows signature recovery. The new public key signature scheme is then applied to create a secure based public key system without restrictions in trust and (b) a one-pass key exchange protocol with mutual authentication.


13 Environment-mediated mobile computing

- ◆ Hans-W. Gellersen, Michael Beigl, Albrecht Schmidt
February 1999 **Proceedings of the 1999 ACM symposium on Applied computing**
Publisher: ACM Press


Full text available:  [pdf\(358.89 KB\)](#) Additional Information: [full citation](#), [reference terms](#)

Keywords: computer-mediated communication, computer-supported co
environment-mediated communication, mobile computing, ubiquitous co

14 Meta-ElGamal signature schemes

 Patrick Horster, Holger Petersen, Markus Michels
November 1994 **Proceedings of the 2nd ACM Conference on Computer
communications security**

Publisher: ACM Press


Full text available:  [pdf\(1.16 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

There have been many approaches in the past to generalize the ElGamal
In this paper we integrate all these approaches in a Meta-ElGamal signat
also investigate some new types of variations, that haven't been consider
method we obtain in our example settings numerous variants of the ElGa
these variants, we can extract new, highly efficient signature schemes, w
proposed before. As an example, we present efficie ...

15 Probabilistic quorum protocols for biometrical user authentication in OLTP

 V. K. Murthy
January 1996 **ACM SIGSAC Review**, Volume 14 Issue 1

Publisher: ACM Press

Full text available:  [pdf\(398.59 KB\)](#) Additional Information: [full citation](#), [abstracts](#)

A statistical zero-knowledge authentication scheme is described for secu
line database transaction processing systems (OLTP). This scheme uses
quorum protocols to validate users using their biometrical characteristics
handwriting and keyboard characteristics). This authentication scheme c
using the present-day smart card technology.

16 The impact of electronic commerce

Kaiyin Huang

◆ April 1997 **Proceedings of the 1997 ACM SIGCPR conference on Computer research**

Publisher: ACM Press

Full text available: [pdf\(702.19 KB\)](#) Additional Information: [full citation](#), [reference](#)

17 Lower bounds on messages and rounds for network authentication protocols

◆ Li Gong

December 1993 **Proceedings of the 1st ACM conference on Computer and communications security**

Publisher: ACM Press

Full text available: [pdf\(1.25 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

The encrypted key exchange (EKE) protocol is augmented so that hosts do not use cleartext passwords. Consequently, adversaries who obtain the one-way hash file may (i) successfully mimic (spoof) the host to the user, and (ii) mount an attack against the encrypted passwords, but cannot mimic the user to the host. Most important security properties of EKE are preserved—an active network attacker has insufficient information to mount dictionary attacks ...

18 Efficient verifiable encryption (and fair exchange) of digital signatures

◆ Giuseppe Ateniese

November 1999 **Proceedings of the 6th ACM conference on Computer and communications security**

Publisher: ACM Press

Full text available: [pdf\(781.40 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

A fair exchange protocol allows two users to exchange items so that either user gets the other's item or neither user does. In [2], verifiable encryption is introduced that can be used to build extremely efficient fair exchange protocols where the exchanged items represent digital signatures. Such protocols may be used to digitalize contracts. This paper presents new simple schemes for verifiable encryption of digital signatures. We make use of ...

Keywords: contract signing problem, digital signatures, fair exchange, protocol


public-key cryptography, verifiable encryption

19 Cross-domain one-shot authorization using smart cards

◆ Richard Au, Mark Looi, Paul Ashley

November 2000 **Proceedings of the 7th ACM conference on Computer communications security**

Publisher: ACM Press

Full text available:  [pdf\(283.05 KB\)](#) Additional Information: [full citation](#), [reference](#)


Keywords: access control, authorization scheme, authorization server, authorization token, smart card

20 Nark: receiver-based multicast non-repudiation and key management

◆ Bob Briscoe, Ian Fairman

November 1999 **Proceedings of the 1st ACM conference on Electronic commerce**

Publisher: ACM Press

Full text available:  [pdf\(168.86 KB\)](#) Additional Information: [full citation](#), [reference](#), [index terms](#)




Keywords: Internet, audit trail, key management, multicast, non-repudiation, watermark

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A Fiat, A Shamir - Crypto, 1986 - Springer

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a credit **card** company, a ... etc.) which issues the **smart cards** to users ...

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W Rankl, W Effing - 2004 - books.google.com

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number 493 8. 1 . 2 Biometric methods 498 8.2 **Smart Card Security** 510 8.2. ...

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Security and Privacy Aspects of Low-Cost Radio Frequency Identification Systems - group of 12 »

SA Weis, SE Sarma, RL Rivest, DW Engels - Security in Pervasive Computing, 2003 - Springer

... the implementation of AES in **smart cards** is presented ... The leaves of the tree correspond

to tag **ID numbers**. Assuming the tags have **unique** IDs, after walking to ...

Cited by 106 - Web Search - BL Direct

[BOOK] RFID Handbook: Fundamentals and Applications in Contactless Smart Cards and Identification - group of 6 »

K Finkenzeller - 2003 - books.google.com

... 3 Example Applications 1 3. 1 Contactless **Smart Cards** 13.2 Public ... CICC Close Coupling

Integrated Circuit Chip **Card** CIU Contactless ... HDX HF I 2 C ICC **ID** ISM ISO ...

Cited by 182 - Web Search - Library Search

RFID Systems and Security and Privacy Implications - group of 16 »

SE Sarma, SA Weis, DW Engels - Workshop on Cryptographic Hardware and Embedded Systems, 2002 - Springer

... contain product code information, but not **unique** identification numbers.

... To support

a **unique** key per tag, a ... memory on relatively resource abundant **smart cards**. ...

Cited by 69 - Web Search - BL Direct

[BOOK] Java Card Technology for Smart Cards: Architecture and Programmer's Guide

Z Chen - 2000 - books.google.com

... I would recommend that this book be added to the **smart card** reading list for anyone

developing **smart** applications. ... 13 2.3 **Smart Card** Hardware 14 2.3. ...

Cited by 180 - Web Search - Library Search

Biometric identification - group of 9 »

A Jain, L Hong, S Pankanti - Communications of the ACM, 2000 - portal.acm.org

... these areas under development, including credit **card** security (MasterCard) and

smartcard security (IBM ... true that face thermograms are **unique** to each ...

Cited by 120 - Web Search - BL Direct

Handbuch der Chipkarten - group of 3 »

W Rankl, W Effing - Carl Hanser Verlag, 1999 - files.hanser.de

... key directory file PUPI Pseudo-**unique** PICC identifier ... comment RFID radio frequency

identification RFU reserved ... SC security conditions SC **smart card** SCC **smart** ...

Cited by 46 - Web Search

A modified remote user authentication scheme using **smart** cards

JJ Shen, CW Lin, MS Hwang - Consumer Electronics, IEEE Transactions on, 2003 - ieeexplore.ieee.org

... The attacker can make his/her IO, equal to **ID**: modp ... Finally, the server

will issue

the **smart card** and PW ... identity string that includes name, **unique number** etc. ...

Cited by 38 - Web Search - BL Direct

Vital signs of identity [biometrics] - group of 2 »

B Miller - Spectrum, IEEE, 1994 - ieeexplore.ieee.org

... vaults and telecommuni- salons area **Smart card** anti fingerprint ... The microprocessor

in the **card** compares PINs and ... or behavioral char- acteristics **unique** to them ...

Cited by 139 - Web Search

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Result Page: 1 2 3 4 5 6 7 8 9 10 Next

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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	"6612486".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/31 08:10
L2	2	"6575835".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/31 08:16
L3	0	"7086087".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/31 08:16
S1	829	"SMART CARD" same (issue\$1 and servic\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:02
S2	1	"SMART CARD" same (issue\$1 and servic\$3) and (secur\$3 adj id)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:05
S3	7	"SMART CARD" same (secur\$3 adj id) and (upload\$3 or download\$3 or reload\$3 or load\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:31
S4	22	("SMART CARD" or "chip card" or "ic card") same ((secur\$3 or authenticat\$3 or encrypt\$3) adj (id or identifier)) and (upload\$3 or download\$3 or reload\$3 or load\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:40
S5	11	("SMART CARD" or "chip card" or "ic card") same ((secur\$3 or authenticat\$3 or encrypt\$3) adj (id or identifier)) same (issu\$4 or reissu\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:43
S6	1	("SMART CARD" or "chip card" or "ic card") same ((secur\$3 or authenticat\$3 or encrypt\$3) adj (id or identifier)) same manufacturer	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:43

EAST Search History

S7	4	("SMART CARD" or "chip card" or "ic card") same ((secur\$3 or authenticat\$3 or encrypt\$3) adj (id or identifier)) same provider	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:49
S8	0	("SMART CARD" or "chip card" or "ic card") same (permission or policy or policies) near5 (upload\$3 or upgrad\$3 or reload\$3 or download\$3) and ((secur\$3 or authenticat\$3 or encrypt\$3) adj (id or identifier))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:51
S9	15	("SMART CARD" or "chip card" or "ic card") same (permission or policy or policies) near5 (upload\$3 or upgrad\$3 or reload\$3 or download\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/29 17:51
S10	11	("5212369" "5923884" "6005942" "6092147" "6233683" "6250557" "6390374" "6402028" "6480959"). PN. OR ("6659345").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/30 08:00
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S12	2	"6199762".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/30 09:36
S13	15	"SMART CARD" same ((secur\$3 or authenticat\$3 or encrypt\$3) adj (id or identifier)) and (upload\$3 or download\$3 or reload\$3 or load\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/10 12:12
S14	786	"SMART CARD" same (secur\$3 or authenticat\$3 or encrypt\$3) and (mastercard or visa or "master card")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/10 12:13
S15	185	("SMART CARD" or smartcard) same (secur\$3 or authenticat\$3 or encrypt\$3 or "tamper resistant" or trusted or protect\$3) and (mastercard or visa or "master card" or "u-commerce " or "universal commerce") and (vendor or merchant or "end user" or customer or cardholder) and ("online identities" or "access rights" or privileges)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/10 12:17

EAST Search History

S16	74	("SMART CARD" or smartcard) same (secur\$3 or authenticat\$3 or encrypt\$3 or "tamper resistant" or trusted or protect\$3) and (mastercard or visa or "master card" or "u-commerce " or "universal commerce") and (vendor or merchant or "end user" or customer or cardholder) and ("online identities" or "access rights" or privileges) and ("SMART CARD" or smartcard) near5 (id or identifi\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/10 12:19
S17	35	("SMART CARD" or smartcard) same (secur\$3 or authenticat\$3 or encrypt\$3 or "tamper resistant" or trusted or protect\$3) and (mastercard or visa or "master card" or "u-commerce " or "universal commerce") and (vendor or merchant or "end user" or customer or cardholder) and ("online identities" or "access rights" or privileges) and ("SMART CARD" or smartcard) near5 (id or identifi\$6) and (den\$3 near3 access\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/10 12:36
S18	34	("SMART CARD" or smartcard) same (secur\$3 or authenticat\$3 or encrypt\$3 or "tamper resistant" or trusted or protect\$3) and (mastercard or visa or "master card" or "u-commerce " or "universal commerce") and (vendor or merchant or "end user" or customer or cardholder) and ("online identities" or "access rights" or privileges) and ("SMART CARD" or smartcard) near5 (id or identifi\$6) and (den\$3 near3 access\$3) and (updat\$3 or upload\$3 or laod\$3 or download\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/10 12:37
S19	34	("SMART CARD" or smartcard) same (secur\$3 or authenticat\$3 or encrypt\$3 or "tamper resistant" or trusted or protect\$3) and (mastercard or visa or "master card" or "u-commerce " or "universal commerce") and (vendor or merchant or "end user" or customer or cardholder) and ("online identities" or "access rights" or privileges) and ("SMART CARD" or smartcard) near5 (id or identifi\$6) and (den\$3 near3 access\$3) and (updat\$3 or upload\$3 or load\$3 or download\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/10 12:39

EAST Search History

S20	71	((SMART or digital or electronic or chip or ic or "e") adj card) same ((secur\$3 or authenticat\$3 or encrypt\$3) adj (id or identifier OR UNIQUE)) and (upload\$3 or download\$3 or reload\$3 or load\$3 or issu\$4 or reissu\$4 or distribut\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/26 11:45
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S22	84	("5721781").URPN.	USPAT	OR	OFF	2006/07/26 13:39
S23	15	("5721781").URPN. and microsoft.as.	USPAT	OR	OFF	2006/07/26 14:15
S24	731	("master card" or visa or "american express") and ((SMART or digital or electronic or chip or ic or "e") adj (card or device))	USPAT	OR	OFF	2006/07/26 14:17
S25	874	("master card" or visa or "american express") and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (software or application)	USPAT	OR	ON	2006/07/26 14:18
S26	806	("master card" or visa or "american express") and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (software or application) and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5)	USPAT	OR	ON	2006/07/26 14:19
S27	801	("master card" or visa or "american express") and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (software or application) and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)	USPAT	OR	ON	2006/07/26 14:20
S28	140	("master card" or visa or "american express") and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (software or application) and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key) near5 ("master card" or visa or "american express")	USPAT	OR	ON	2006/07/27 16:39

EAST Search History

S29	140	("master card" or visa or "american express") and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (software or application) and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5 or permission) and (id or identi\$8 or unique or number or key) near5 ("master card" or visa or "american express")	USPAT	OR	ON	2006/07/27 07:33
S30	12	("master card" or visa or "american express") same ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (software or application) same (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5 or permission) same (id or identi\$8 or unique or number or key) near5 ("master card" or visa or "american express")	USPAT	OR	ON	2006/07/27 07:35
S31	0	("6850916").URPN.	USPAT	OR	OFF	2006/07/27 07:46
S32	10	("6367011").URPN.	USPAT	OR	OFF	2006/07/27 08:17
S33	94	("5578808").URPN.	USPAT	OR	OFF	2006/07/27 09:05
S34	93	("5578808").URPN. and (unique or id or identi\$5 or key or secur\$3 or authoriz\$5 or encrypt\$3 or secret\$2 or number or certificate)	USPAT	OR	OFF	2006/07/27 09:07
S35	91	("5578808").URPN. and (unique or id or identi\$5 or key or secur\$3 or authoriz\$5 or encrypt\$3 or secret\$2 or number or certificate) and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3)	USPAT	OR	OFF	2006/07/27 09:09

EAST Search History

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S39	1	"6317832".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/27 16:37
S40	222	726/9.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/27 16:39
S41	252	726/7.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/27 16:38
S42	595	726/5.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/27 16:38
S43	1190	726/4.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/27 16:38
S44	184	726/17.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/27 16:38
S45	126	726/20.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/27 16:38
S46	23	726/9.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 16:41
S47	16	726/7.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 16:42

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S49	54	726/4.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 16:42
S50	8	726/17.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 16:42
S51	21	726/20.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:19
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S54	0	726/20.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application) and "unique" near3 (message adj (id or identifier or identity))	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:20
S55	706	717/168.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:22
S56	310	717/171.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:21
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S63	1	717/168.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or autoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application) and "unique" near3 (message adj (id or identifier or identity))	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:23
S64	1	717/171.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or autoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application) and "unique" near3 (message adj (id or identifier or identity))	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:24
S65	0	717/172.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or autoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application) and "unique" near3 (message adj (id or identifier or identity))	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:23
S66	0	717/173.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or autoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application) and "unique" near3 (message adj (id or identifier or identity))	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:23

EAST Search History

S67	0	717/174.ccls. and ((SMART or digital or electronic or chip or ic or "e") adj (card or device)) and Issu\$4 and (secur\$3 or authenticat\$3 or encrypt\$3 or validat\$3 or authoriz\$5) and (id or identi\$8 or unique or number or key)and (initial\$2 or load\$3 or upload\$3 or updat\$3 or reload\$3 or replenish\$3 or upgrad\$3 or download\$3 or add\$3) near3 (software or application) and "unique" near3 (message adj (id or identifier or identity))	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/27 17:23
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